CORRECTED VERSION

(19) World Intellectual Property Organization International Bureau

AIPO OMPIO

(43) International Publication Date 1 September 2005 (01.09.2005)

PCT

(10) International Publication Number WO 2005/080397 A3

- (51) International Patent Classification: *C07D 487/00* (2006.01)
- (21) International Application Number:

PCT/US2005/005218

(22) International Filing Date:

17 February 2005 (17.02.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11 -

60/545,288 18 February 2004 (18.02.2004) US 60/545,580 19 February 2004 (19.02.2004) US

- (71) Applicants (for all designated States except US): ASTRAZENECA AB [SE/SE]; SE-151 85 Södertälje (SE). NPS PHARMACEUTICALS, INC. [US/US]; 383 Colorow Drive, Salt Lake City, UT 84108 (US).
- (72) Inventors; and

lacksquare

(75) Inventors/Applicants (for US only): JOHANSSON, Martin [SE/SE]; c/o AstraZeneca R & D Headquarters, Global Intellectual Property, SE-151 85 Södertälje (SE). WENSBO, David [SE/SE]; c/o AstraZeneca R & D Headquarters, Global Intellectual Property, SE-151 85 Södertälje (SE). MINIDIS, Alexander [SE/SE]; c/o AstraZeneca R & D Headquarters, Global Intellectual Property, SE-151 85 Södertälje (SE). STAAF, Karin [SE/SE]; c/o AstraZeneca R & D Headquarters, Global Intellectual Property, SE-151 85 Södertälje (SE). KERS, Annika [SE/SE]; c/o AstraZeneca R & D Headquarters, Global Intellectual Property, SE-151 85 Södertälje (SE). EDWARDS, Louise [CA/CA]; c/o NPS Allelix Corp., 6850 Goreway Drive, Mississauga, Ontario LAV 1V7 (CA). ISAAC, Methvin [CA/CA]; c/o NPS Allelix Corp., 6850 Goreway Drive, Mississauga, Ontario LAV 1V7 (CA). STEFANAC, Tomislav [CA/CA]; c/o NPS Allelix Corp., 6850 Goreway Drive, Mississauga, Ontario LAV 1V7 (CA). SLASSI, Abdelmalik [CA/CA]; c/o NPS Allelix Corp., 6850 Goreway Drive, Mississauga, Ontario

L4V 1V7 (CA). MCLEOD, Donald [US/US]; c/o NPS Pharmaceuticals, Inc., 383 Colorow Drive, Salt Lake City, UT 84108 (US). XIN, Tao [CA/CA]; 10 Comoq Avenue, Woodbridge, Ontario L4H 2B1 (CA).

- (74) Agents: MEIKLE, Andrew, Duff et al.; Birch, Stewart, Kolasch & Birch, LLP, 8110 Gatehouse Road, Suite 100 East, P.O. Box 747, Falls Church, VA 22040-0747 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

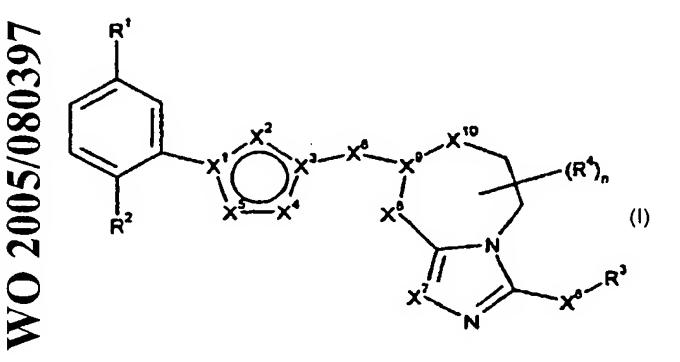
- with international search report
- (88) Date of publication of the international search report:
 22 December 2005
- (48) Date of publication of this corrected version:

22 June 2006

(15) Information about Correction: see PCT Gazette No. 25/2006 of 22 June 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUSED HETROCYCLIC COMPOUNDS AND THEIR USE AS METABOTROPIC RECEPTOR ANTAGONISTS FOR THE TREATMENT OF GASTROINTESTINAL DISORDERS



(57) Abstract: The present invention is directed to compounds of formula: (I); wherein X¹, X², X³, X⁴, X⁵, X⁶, X⁷, X⁸, X⁹, X¹⁰, R¹, R², R³, R⁴, and n are as defined for formula I in the description. The invention also relates to processes for the preparation of the compounds and to new intermediates employed in the preparation, pharmaceutical compositions containing the compounds, and to the use of the compounds for treating gastrointestinal disorders.